

## NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD

### CHANNEL VEGETATION CODE322 (acre)

#### Definition

Establishing and maintaining adequate plants on channel banks, berms, spoil, and associated areas.

#### Purpose

To stabilize channel banks and adjacent areas and reduce erosion and sedimentation. To maintain or enhance the quality of the environment, including visual aspects and fish and wildlife habitat.

#### Scope

This standard applies to the vegetation of open channels, streams, or ditches. It applies to floodwater diversions (400), floodways (404), open channels (582), stream channel stabilization (584), streambank protection (580), and surface drainage, main or lateral (607-B). It does not apply to diversions (362), grassed waterways or outlets (412), or surface drainage, field ditches (607-A).

#### Conditions where practice applies

On channel banks, berms, spoil, and associated areas: except grassed waterways, diversions and areas with protective linings, those covered with water for an extended period, or in areas where conditions will not support adequate vegetation.

#### Planning considerations

- Evaluate slopes and soil material, time of year for proper establishment of vegetation, necessity for irrigation, visual aspects, fish and wildlife, fire hazards and special needs when construction is done from one side. Other considerations include:
- Protection of channel vegetation from sediment deposits resulting from wind and water erosion.
- Provisions for safety and protection of human life and property in all aspects of design, application, and maintenance;

- Methods by which endangered and threatened plants and nationally recognized natural vegetated areas will be identified and protected;
- Requirements for over seeding or planting woody or herbaceous vegetation on the un-excavated side when construction is done from one side;
- Identification of desirable trees and other vegetation and means for their preservation, and
- Special techniques for establishing and maintaining vegetation near inlets, outlets, or other appurtenances.

#### Specifications guide

An adequate vegetative cover stabilizes the channel area and provides for temporary or permanent protection or both.

Slide slopes. Specify side slopes that permit establishing and maintaining desired vegetation and that have been effective in the past. In urban and recreation areas, flatter side slopes may be required to provide for public safety and enhancement of visual resources.

Species selection. Specify species that are suited to the soil, climate, and exposure. They must provide a lasting cover to protect the channel area and to maintain the channel design capacity. Use special-purpose plantings outside the channel for wildlife, recreation, or visual resources.

Seedbed preparation. Specify seedbed preparation, fill rills and gullies, and remove stones and debris.

Fertilizer and soil amendments. Specify fertilizers and soil amendments, including analyses, rate method of application, and requirements for top-dressing.

Planting. Specify dates, rates, and methods of seeding, sprigging, sodding or planting.

Mulching. Specify types and rates of mulch materials and the method of anchoring.

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Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

Irrigation. Specify irrigation if it is needed for establishing vegetation.

ditches take up nitrate-nitrogen which may be released during vegetation die-back.

### **Minnesota Supplement - Specifications Guide**

All seeding criteria will be based on the standard for Critical Area Planting - 342.

### **Planning considerations for water quantity and quality**

#### Quantity

- Potential runoff from bare soil during construction.
- Effects on the water budget components, especially on volumes and rates of runoff.
- Vegetating the channel may reduce the rate and velocity for the same flow depth. Soil water in the streambanks will be reduced by the amount used by the plants to support their growth.

#### Quality

- Effects of nutrients or pesticides in runoff during establishment of vegetation.
- Effects of streambank erosion before vegetative establishment.
- Channel vegetation may have an effect on surface water quality during the time of establishment. The banks will be exposed during grading, seed bed preparation, seeding/ planting until the protective vegetation is established. During the establishment period sediment delivery will be increased. Where fertilizers are applied, they may be washed into the stream or be applied directly to the water.
- Streambank erosion will be reduced in the long term. The channel side slope may be stabilized, reducing the potential for bank failure. These sources of sediment and associated sediment-attached substances may be reduced which will improve water quality. When pesticides are used to control undesired vegetation they may drift or wash into surface water. The vegetation will trap some of the sediment moving overland to the channel. Stream temperatures could be reduced because of shading and lower soil temperatures when woody vegetation is used. Vegetation in